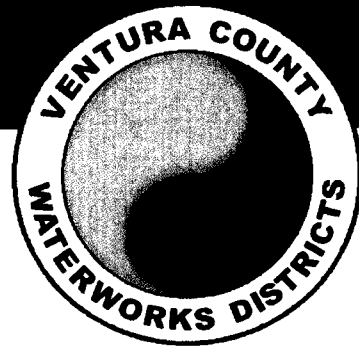
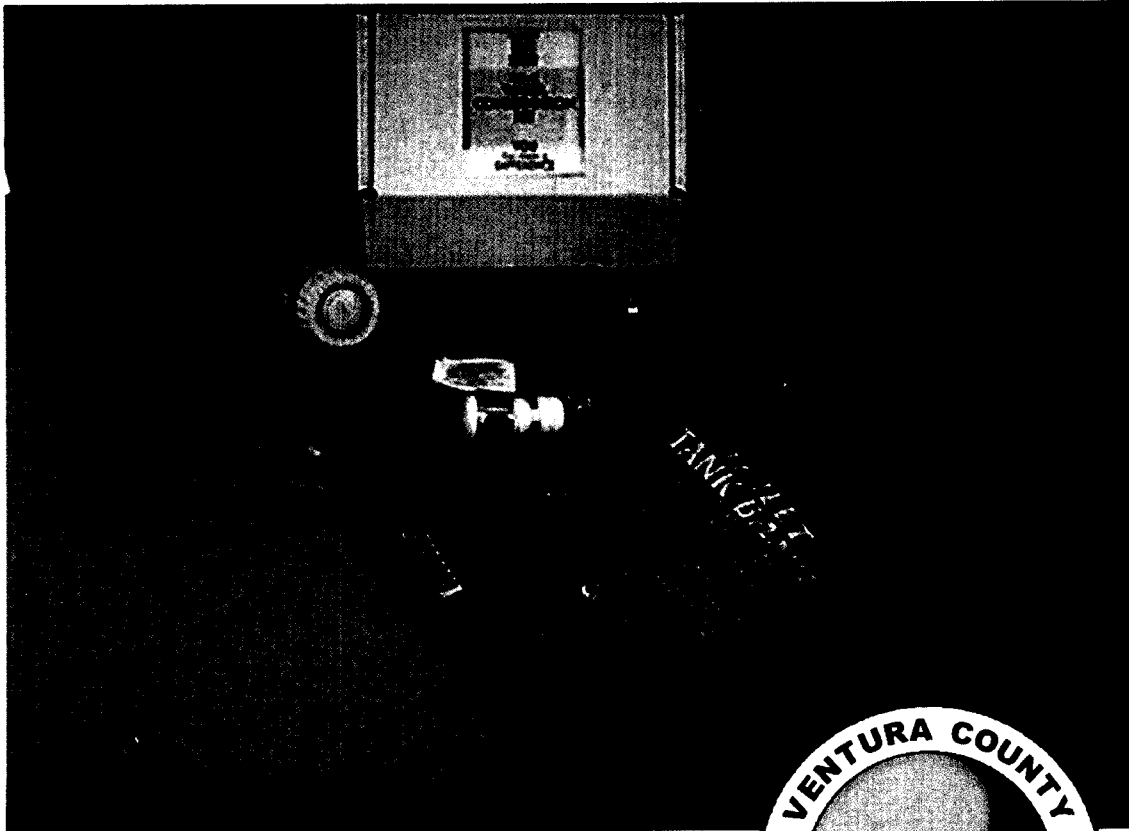


Urban Water Management Plan 2005 Update



County of Ventura Waterworks District No. 1

December 2005

Kennedy/Jenks Consultants

Engineers & Scientists

Kennedy/Jenks Consultants

Engineers & Scientists

Center Promenade
1000 Hill Road
Suite 200
Ventura, California 93003
805-658-0607
FAX 805-650-1522

8 December 2005

Mr. Satya Karra
General Manager
Ventura County Water and Sanitation Department
7150 Walnut Canyon Road
P.O. Box 250
Moorpark, CA 93020-0250

Subject: Submittal of Urban Water Management Plan 2005 Update
K/J 0589035

Dear Mr. Karra:

In accordance with our Agreement dated 4 May 2005 Kennedy/Jenks Consultants submits ten (10) copies of the Urban Water Management Plan 2005 Update (UWMP) to the Ventura County Waterworks District No. 1 (District). Kennedy/Jenks prepared this UWMP in accordance with the State of California Urban Water Management Planning Act. This UWMP provides updated information regarding the District's water service area, water supplies, water demands, recycled water, and water shortage contingency plan. In addition, the UWMP provides a summary of existing demand management programs and recommendations for additional programs. Furthermore, this UWMP includes comments received from the District prior to the Board meeting.

We appreciate the information and efforts provided by you and your staff during preparation of this document. For any specific questions regarding the UWMP, please contact Brad Milner at (805) 658-0607.

Very truly yours,

KENNEDY/JENKS CONSULTANTS



Brad Milner
Project Manager

Enclosures (10)

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Section 1: Introduction

This Section presents a brief description of the provisions of the Urban Water Management Planning Act (Act), provides a description of the Ventura County Waterworks District No. 1 (District) and its service area characteristics, including population, climate, water demand, water supply, water conservation, water recycling, and reliability planning. The contents of this UWMP are also provided below.

1.1 The Urban Water Management Plan

In 1983, the California Legislature enacted the Act (AB 797; Water Code, Division 6, Part 2.6, Section 10610-10656). This Act requires water suppliers serving more than 3,000 customers or water suppliers providing more than 3,000 acre-feet (AF) of water annually to prepare an Urban Water Management Plan (UWMP) to promote water demand management and efficient water use. The Act also requires water suppliers to develop, adopt, and file an UWMP (or update) every five years until 1990. In 1990, the Legislature deleted this sunset provision (AB 2661). Accordingly, the UWMP must be updated a minimum of once every five years on or before December 31 in the years ending in 0 and 5. The Act has subsequently been amended since its adoption.

Recent changes approved in 2002 and 2004 include SB 1348, SB 1384, SB 1518, AB 105, and AB 318. SB 1348 requires that the Department of Water Resources (DWR) consider the demand management activities of urban water supplier in the grant and loan application evaluation. SB 1384 requires that urban water supplier to submit a copy of their UWMP to their wholesale supplier. This bill encourages coordination between the wholesale and retail agencies. SB 1518 requires additional information regarding the use of recycled water including a comparison of previously projected use to actual use to determine the effectiveness of recycled water initiatives. AB 105 requires an urban water supplier to submit a copy of their UWMP to the California State Library. AB 318 requires urban water suppliers to provide a discussion of the desalination opportunities available to them. This includes ocean water, brackish water, and groundwater desalination for use as a long-term supply.

A copy of the current Act is provided in Appendix A.

1.1.1 Purpose of the Plan

An UWMP is designed to provide an effective management and planning tool for water agencies throughout California. It allows for a succinct summary of an agency's water supplies, demands, and plans to ensure future reliability. It also encourages the efficient management of water supplies by requiring a discussion of potential water transfers and exchanges, desalination, and recycled water opportunities.

1.1.2 Preparation of the Plan

In efforts to improve coordination and assist in inter-agency planning to maximize resources within Ventura County, the District has prepared this plan with in the coordination summarized in Table 1-1.

TABLE 1-1
AGENCY COORDINATION^(a)

	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt
Ventura County Waterworks District No. 1	X	X	X	X	X	X
Calleguas Municipal Water District				X	X	
Metropolitan Water District				X	X	
Fox Canyon Groundwater Management Agency				X	X	
Ventura County City of Moorpark				X	X	
Ventura County Waterworks District No. 8					X	

Note: Table will be updated for final report.

Prior to adoption, the UWMP was made available to the public for inspection and a public hearing was held. The UWMP must be adopted by the District's governing Board, and is subject to California Government Code pertaining to legal public noticing. The UWMP must be filed with the DWR within 30 days of adoption. A copy of the notice for a public hearing and the resolution of adoption are included in Appendix B. The UWMP is available for public review at the Ventura County Water and Sanitation Department Office located at 7150 Walnut Canyon Road, Moorpark and the Moorpark Branch of the Ventura County Library, located at 699 Moorpark Avenue, Moorpark.

1.2 The Water Agency

The District was formed in 1921 to provide water and sanitation services to the City of Moorpark and surrounding areas. It is governed by the Ventura County Board of Supervisors with a Citizens' Advisory Committee providing input on policy and rate adjustment matters. The Water and Sanitation Department of the County of Ventura, Public Works Agency is responsible for the administration, operation, and maintenance of the water system.

1.3 Service Area Characteristics

The District's service area encompasses the City of Moorpark and contiguous portions of the unincorporated County. Moorpark is located in the eastern portion of Ventura County, approximately five miles west of the City of Simi Valley and five miles north of the City of Thousand Oaks. Figure 1-1 provides an overview of the service area.

1.3.1 Climate

The climate is characterized by hot summer days, cool summer nights, cool winter days and cool winter nights. Generally, annual average temperatures range from 49°F to 78°F with precipitation at approximately 15.85 inches per year, of which most occurs during the winter season. Table 1-2 provides a summary of the climate for the District for calendar year 2004.

**TABLE 1-2
CLIMATE**

	Jan	Feb	Mar	Apr	May	Jun
Standard Monthly Average ETo (in) ^(a)	1.83	2.20	3.42	4.49	5.25	5.67
Average Rainfall (in) ^(b)	0.51	2.38	0.99	0.06	0	0
Average Max Temperature (oF) ^(b)	65.3	60.6	75.4	72.7	77.5	77.7
Average Min Temperature (oF) ^(b)	44.9	43.9	52.6	50.6	53.8	56.8

	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Standard Monthly Average ETo (in) ^(a)	5.86	5.61	4.49	3.42	2.36	1.83	46.43
Average Rainfall (in) ^(b)	0	0	0.01	4.09	0.31	6.15	14.5
Average Max Temperature (oF) ^(b)	83.4	83.3	85.1	73.2	66.3	63.7	73.7
Average Min Temperature (oF) ^(b)	58.7	58.1	59.4	51.7	45.9	48.0	52.0

Notes:

(a) CIMIS data for Santa Paula Station # 198.

(b) Weather Underground for Simi Valley 2004 calendar year.

1.3.1.1 Effects of Global Warming

In the recent draft update of DWR's Water Plan, an assessment of the impacts of global warming on the State's water supply was conducted using a series of computer models based on decades of scientific research. Model results indicate increased temperature, reduction in Sierra snow depth, early snow melt, and a rise in sea level. These changing hydrological conditions could affect future planning efforts which are typically based on historic conditions. Difficulties that may arise include:

- hydrological conditions, variability, and extremes that are different than what current water systems were designed to manage.
- changes occurring too rapidly to allow sufficient time and information to permit managers to respond appropriately.
- special efforts or plans to protect against surprises and uncertainties.

As such, DWR will continue to provide updated results from these models as further research is conducted and information becomes available.

1.3.2 Other Demographic Factors

Historically, land uses within the District's service area have focused primarily on municipal and industrial uses (M&I) with agricultural use being secondary.

Increases in future water demands are expected to come primarily from the residential sector as the District's service area builds out. The projected population for the year 2020 was based on the City's General Plan and represents build-out for the District's service area. As such, no growth past 2020 is assumed. The estimated population projections are shown in Table 1-3.

**TABLE 1-3
POPULATION PROJECTION**

	2004	2010	2015	2020	2025	2030
Population ^(a)	35,500	40,060	44,790	49,520	49,520	49,520

Note: (a) The 2020 population is the projected build-out population from the City's General Plan. No growth past 2020 is assumed.

1.4 Contents of this Plan

The organization of this report and a brief description of the respective sections are outlined below.

Section 1: Introduction and Summary

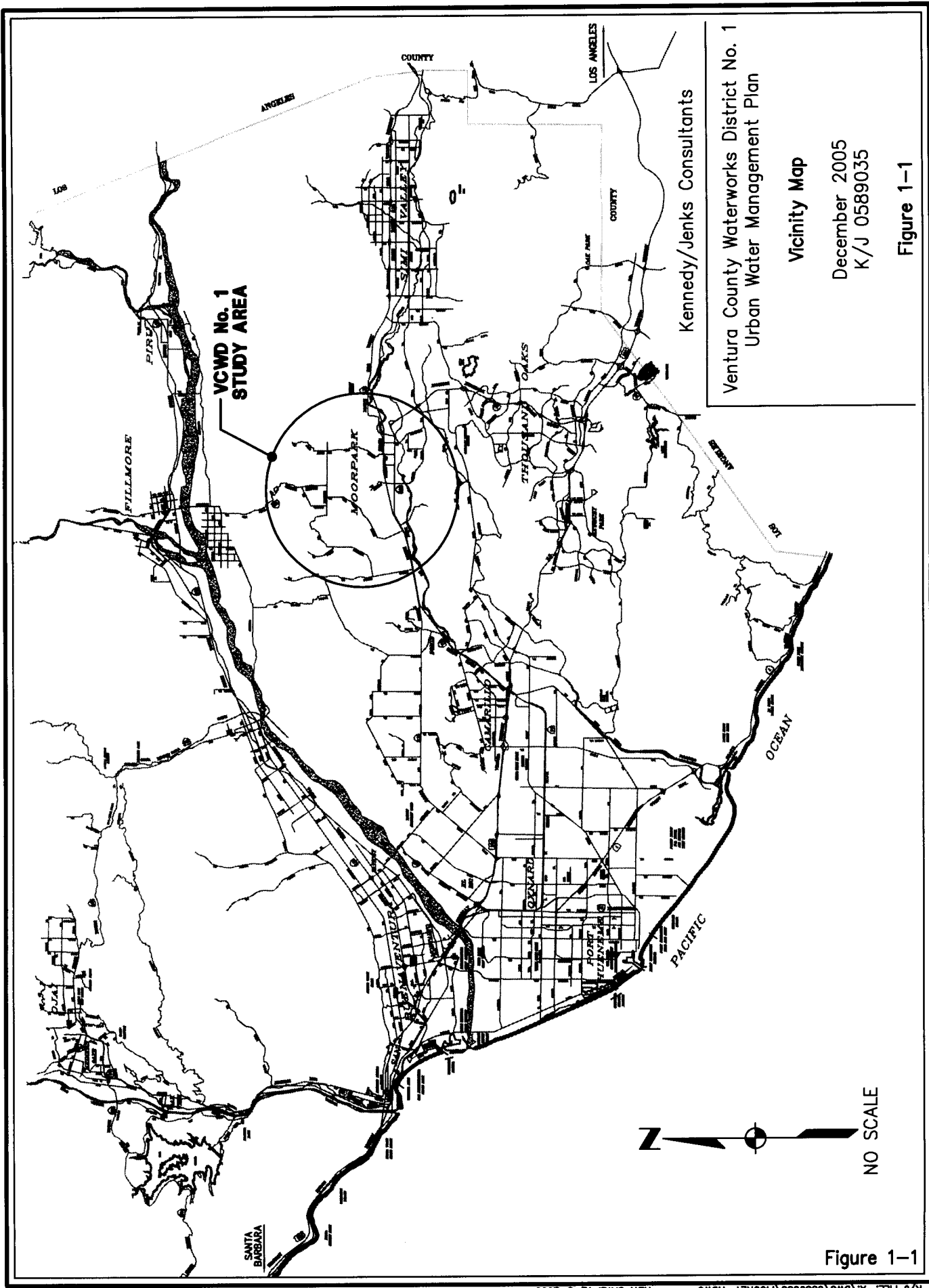
This section provides a brief introduction and summary of UWMPs, describes the planning process for this UWMP, provides an overview of this UWMP's service area, and summarizes the key elements of this UWMP.

Section 2: Water Supply Resources

This section describes the existing and planned water supplies available to the service area. Supplies include groundwater, imported water, and recycled water. Projected supply by source is presented over the next 25 years, in 5-year increments.

Section 3: Water Supply Reliability Planning

This section presents the water reliability assessment for the District's service area. It compares the total projected water demand with the expected water supply over the next 25 years, in 5-year increments – i.e., 2010, 2015, 2020, 2025, and 2030. Assessments are also presented for a single dry year and multiple dry years (i.e., droughts). The purpose of this analysis is to determine whether there is a reasonable likelihood of meeting projected future demands with the mix of resources currently under consideration. The conclusion of this section is that, if projected imported and local supplies are developed as indicated, no water shortages are anticipated in the District's service areas during the UWMP period and beyond.



Section 4: Water Use Provisions

This section on water demand describes historic, current, and projected water usage within the District's service area. Historic water usage patterns and future water demand are determined by population, land use, and water services. In addition, the effects of weather and water conservation on historic water usage are discussed.

Section 5: Water Demand Management Measures

This section addresses the 14 water conservation measures called Demand Management Measures (DMM), specified in the latest revision of the UWMP Act, and describes current and future implementation of these water conservation measures within the District's service area. The DMMs are the same as the 14 urban Best Management Practices (BMPs) developed by the California Urban Water Conservation Council (CUWCC).

The measures range from public information and education programs to physical solutions, such as residential plumbing retrofit, as well as policy/financial incentives, such as rebate programs and pricing policies. Many of the conservation measures are already being implemented.

Section 6: Water Shortage Contingency Analysis

This section presents the activities to be utilized in the event of a catastrophic water supply interruption, such as an earthquake or a drought. Stages of action are described, including levels of rationing and reduction goals, priorities of use, water shortage stages and triggering mechanisms, water allotment methods, mandatory prohibitions on water use, and excessive use penalties.

1.5 List of Abbreviations and Acronyms

AF	acre-feet
AFY	acre-feet per year
ASR	Aquifer Storage and Recovery
BMPs	Best Management Practices
CEQA	California Environmental Quality Act
SWP	California State Water Project
CUWCC	California Urban Water Conservation Council
CMWD	Calleguas Municipal Water District
CVP	Central Valley Project
cfs	cubic feet per second
DMM	Demand Management Measures
DWR	Department of Water Resources
ERPs	Emergency Response Procedures
FCGMA	Fox Canyon Groundwater Management Agency
gpd	gallons per day
gpd/ft	gallons per day per foot
gpm	gallons per minute
IIP	Incremental Interruption Plan
IRP	Integrated Resource Plan
LAS	Lower Aquifer System

MWD	Metropolitan Water District
mg/L	milligrams per liter
mgd	million gallons per day
MWTP	Moorpark Wastewater Treatment Plant
M&I	Municipal and Industrial
ppb	parts per billion
RUWMP	Regional Urban Water Management Plan
RO	Reverse Osmosis
SVWQP	Simi Valley Water Quality Plant
TDS	Total Dissolved Solids
ULFT	ultra low flush toilets
UAS	Upper Aquifer System
UWMP	Urban Water Management Plan
Act	Urban Water Management Planning Act
District	Ventura County Waterworks District No. 1
WSCP	Water Shortage Contingency Plan

Section 2: Water Supply Resources

This Section provides a detailed discussion of the existing and planned water supplies available to the District. The District currently receives water from local groundwater, imported water, and recycled water sources. Each of the water sources are described in detail in the subsections below. Planned water supply resources are described as well.

2.1 Existing Supply

The District provides its customers a mix of local groundwater and imported water from MWD via CMWD. Historically, imported water has made up approximately 80 percent of the District's water supply. In 2004, however, imported water consisted of nearly 100 percent of the District's supply. Recycled water is also currently available in a limited portion of the District's service area.

The District's current sources of supply are described below.

2.1.1 Local Groundwater Supply

The North Las Posas Basin supplies all the local groundwater for the District. The North Las Posas Basin is 18 miles long and 4.5 miles wide with land usage consisting primarily of agriculture except in Moorpark, which is the only significant development in the basin. Geological investigations recently led to the discovery of a north/south fault that distinctly divides the basin. The two halves are the East Las Posas and West Las Posas Basins. The District's wells are located in the East Las Posas Basin. The quality of the water in the basin is such that chlorination is the only treatment required to comply with Title 22 Primary Standards. The primary aquifer system, the Lower Aquifer System (LAS), consists of the Fox Canyon Aquifer and the Grimes Canyon Aquifer. Supply is primarily through wells with yields of 1,000 to 1,500 gallons per minute (gpm). Although estimates of storage capacity vary, the North Las Posas Basin is generally believed to have a total storage capacity between 3,000,000 and 3,500,000 acre-feet (AF) (California Department of Water Resources, 1975 and 1953 and CMWD/MWD, 1989).

2.1.1.1 Fox Canyon Aquifer

The Fox Canyon Aquifer is composed of marine and non-marine sand and gravel. Its thickness ranges from 200 to 400 feet with a transmissivity of 20,000 to 100,000 gallons per day per foot (gpd/ft). The aquifer lies in the lower Pleistocene San Pedro Formation.

2.1.1.2 Grimes Canyon Aquifer

The aquitard that separates the Fox Canyon and the underlying Grimes Canyon Aquifer is composed of fine sediments with low permeability and attains a maximum thickness of about 100 feet in the Las Posas Basin. The Grimes Canyon Aquifer is composed of marine sand with minor gravel, with a maximum thickness of 400 feet and whose bottom forms the effective base of fresh aquifers in the basin. This aquifer lies in part of the Plio-Pleistocene Santa Barbara Formation.

**TABLE 2-1
GROUNDWATER PUMPING HISTORY (AF)**

	2000	2001	2002	2003	2004
<i>North Las Posas Groundwater Basin:</i>					
District	603.4	1,512.4	1,538.4	720.8	7.5
Percent of Total Supply	5.2	14.2	12.1	5.8	0.05

Source: District pumping records.

2.1.1.3 Fox Canyon Groundwater Management Agency

The Fox Canyon Groundwater Management Agency (FCGMA) was established in Ventura County by a special act of the State Legislature in 1982 to control groundwater overdraft and minimize the threat of seawater intrusion in the upper and lower aquifer systems of the Oxnard Plain. After completing the Fox Canyon Groundwater Management Agency Planning Study that analyzed the condition of the LAS and UAS, the FCGMA adopted a plan for management of the LAS and UAS within the FCGMA boundaries in 1985. The objective of that plan and other policies adopted by the FCGMA is to eliminate overdraft in their service area, which includes the East and West Las Posas Basins, and bring these basins to a "safe yield" condition by the year 2010. A "safe yield" condition is achieved when groundwater extraction from a basin are approximately equal to annual replenishments of water into the groundwater basin.

2.1.1.3.1 FCGMA Management Plans

Major elements of the LAS Plan include the following:

1. Monitoring for seawater intrusion in the LAS near the coastline by constructing four new monitoring wells.
2. Development of Contingency Plans in the event seawater intrudes the LAS. These plans call for conservation and reclamation efforts, increased monitoring and pumping restrictions.
3. Implementation of pumping restrictions in the North Las Posas Basin would prohibit expansion of all types of water use to land on or topographically above the LAS outcrop or to other nonwater-bearing areas. This outcrop more or less parallels the south flank of South Mountain. The restriction would regulate the drilling of new LAS water wells and use of groundwater in the North Las Posas Basin to ensure that the adopted FCGMA groundwater pumping projections are not exceeded.
4. Pumpage will be accurately monitored throughout the FCGMA by requiring semiannual reporting of metered extractions. Results will be used to verify water use rates and to limit groundwater extractions in basins where adopted FCGMA extractions are exceeded after adjustment of the date to account for wet and dry years.

2.1.1.3.2 Ordinance No. 8

On June 26, 2002, the FCGMA adopted Ordinance No. 8. This ordinance conglomerates each of the active individual ordinances (Ordinances Nos. 1.3, 3.2, 4.3, and 5.9) into a single

comprehensive ordinance. One of the key elements of FCGMA Ordinance No. 8 is the gradual reduction in groundwater extractions by all municipal pumpers except those with baseline extraction allocations or annual efficiency extraction allocations. FCGMA assigned allocations to each groundwater pumper. The reduction schedule is based on the average "historical extraction" using the five calendar years of reported extractions from 1985 to 1989. (While groundwater rights in the Las Posas Basin have not been definitively adjudicated by a court, the extraction allocations reflect the prior production of groundwater by each pumper, which is one of the key considerations in determining groundwater rights.)

Groundwater extraction allocations for each well are set according to the following formula:

- 1992-1994 extraction allocation = 95 percent of historical extraction, as adjusted.
- 1995-1999 extraction allocation = 90 percent of historical extraction, as adjusted.
- 2000-2004 extraction allocation = 85 percent of historical extraction, as adjusted.
- 2005-2009 extraction allocation = 80 percent of historical extraction, as adjusted.
- After 2009 extraction allocation = 75 percent of historical extraction, as adjusted.

Baseline allocations are not subject to the incremental reductions. Pursuant to its Ordinance No. 8, FCGMA also has the authority to grant an "annual efficiency allocation" to those agricultural users whose operations have demonstrated a certain level of efficiency and conservation in their water usage. Thus, although an efficiency allocation may be different than the extraction allocation, such efficiency allocations further the goal of bringing the basin to safe yield by encouraging water conservation.

The schedule of reducing groundwater extractions in the Las Posas Basin was based on detailed studies conducted by FCGMA that determined the reduction in groundwater extractions that would be necessary to eliminate overdraft by 2010 and bring the Basin into a safe yield condition. The FCGMA plans to achieve these reductions in groundwater extraction through a number of measures identified in Ordinance No. 8, including (1) prohibition of the operation of any groundwater extraction facility without a valid extraction allocation from FCGMA, (2) monitoring the level of extractions through metering of all wells, (3) imposition of a surcharge on all over-extractions in an amount sufficient to purchase replenishment water, and (4) imposition of criminal and civil penalties on any person who fails to comply with Ordinance No. 8.

In July 2005, the FCGMA approved Ordinance No. 8.1, a revision to Ordinance No. 8, which became effective in September 2005. One of the changes in Ordinance No. 8.1 is the change of title from Agency Coordinator to Executive Officer to run the daily functions of the FCGMA.

Unused groundwater allocation (or conservation credits) can be accumulated and used in future years if additional water supplies are needed without incurring a FCGMA monetary penalty as long as the aquifer system is not damaged. Conservation credits are obtained by extracting less groundwater than the operator's historical extraction allocation (FCGMA Ordinance No. 8, Section 5.7.1.1). These allocations and credits are subject to the availability of groundwater. Credits are essentially "banked" in the aquifer and stored for later use by the District (District's UWMP, pp. 10, 14). The District can also accrue groundwater storage credits by importing and

recharging imported water to the aquifers. These credits can also be used in the future without incurring the FCGMA penalty as long as the aquifer system is not damaged.

The safe yield estimate for the FCGMA area is approximately 120,000 AFY. Allowing for changes in annual rainfall, the reductions in groundwater allocations imposed by the FCGMA have significantly reduced groundwater extractions. The FCGMA anticipates that it will be able to meet its goal of reducing extractions to safe yield levels by 2010.

2.1.1.4 District Wells

The District owns six wells in the North Las Posas Basin: No. 5, No. 15, No. 95, No. 96, No. 97, and No. 98. Well No. 5 was recently abandoned due to a recurring coliform problem. Construction of a new well, Well No. 20, is expected to be completed in 2005 with a capacity of 1,200 gpm. Upon completion of Well No. 20, the District will have a total pumping capacity of 4,525 gpm.

As mentioned above, the District has a groundwater allocation from FCGMA. A copy of the District's allocation through the FCGMA is provided in Appendix C. Although each well has an associated allocation, the District has opted to combine the individual well allocations into one allocation for the District. This provides the District with some flexibility by allowing them to pump different amounts of water from any given well or wells (up to the total allocation amounts) based on system demands.

For 2000 through 2004, the District's allocation was 2,474 AF. Cutbacks in 2005 and 2010 will result in groundwater pumping allocation limitations of 2,329 and 2,183 AF, respectively, if no additional allocation transfers are granted. The District pumped 7.5 AF of groundwater from its wells in 2004, which was significantly less than their annual allocation. The difference between the District's allocation and actual pumping results in a groundwater conservation credit that the District can utilize to provide additional water in dry water years.

The District plans on developing a new well, Well No. 20, roughly 1,500 feet southeast of Well No. 15 with an anticipated capacity of 1,200 gpm (Karra, 2004). Although completion of this well will not secure additional groundwater rights for the District, it will provide redundant extraction facilities should existing wells become inoperative and will allow for increased extraction capacity during emergency situations. This will allow the District to utilize groundwater conservation credits to supplement its water resources should imported water deliveries be reduced or curtailed during a drought or emergency.

Table 2-2 provides a summary of the District's projected groundwater pumping from the North Las Posas Basin through 2030.

**TABLE 2-2
PROJECTED GROUNDWATER PUMPING (AF)**

Basin Name	2010	2015	2020	2025	2030
<i>North Las Posas Groundwater Basin:</i>					
District	2,183	2,183	2,183	2,183	2,183
Percent of Total Supply	13.3	11.9	11.2	11.2	11.2

2.1.2 Wholesale (Imported) Water

The District purchases imported surface water from CMWD, who in turn purchases State Project Water from MWD. Imported water supply originates in Northern California and is conveyed over 500 miles to Southern California through the State Water Project's (SWP) system of reservoirs, aqueducts and pump stations. Water is filtered and disinfected at MWD's Joseph Jensen Filtration Facility in Granada Hills. CMWD receives the treated water from MWD via the MWD West Valley Feeder and either stores the treated water in Lake Bard to be treated later or distributes the water among its purveyors. The District receives water from CMWD at 10 metered turnouts. Figure 2-1 shows the location of these turnouts.

The District purchased approximately 13,157 acre-feet of water from CMWD in 2004. Existing agreements the District has with CMWD do not guarantee the quantity of water the District may purchase. However, to the extent that water is available to CMWD, CMWD has an obligation to provide water to meet demands of its member agencies, such as the District, by virtue of CMWD's enabling statute, and governing regulations and applicable agreements with the member agencies. CMWD's historical practice confirms that obligation and CMWD's satisfaction thereof. CMWD, in existence since 1953, currently wholesales water to 23 local agencies and private companies, which in turn deliver water to approximately 550,000 people (residents, businesses, and agriculture). CMWD supplies approximately 75 percent of the total demand within its service area, which is roughly 375 square miles in southern Ventura County. CMWD has served the needs of the District, without fail except for a few days following the Northridge Earthquake.

Similarly, MWD has the same obligation to provide available water to its member agencies, such as CMWD, based on its existing statute, governing regulations, and applicable agreements. MWD was organized in 1928, covers nearly 5,200 square miles and is currently composed of 26 member agencies, including cities, municipal water districts, and one county water authority. Those member agencies in turn, serve water to residents in more than 145 cities and 94 unincorporated communities. As discussed below, both MWD and CMWD are undertaking a variety of programs to increase the reliability of imported water deliveries. Both CMWD and MWD, due to their historical performance and scope of operations, have provided and will continue to provide a reliable source of water to the District.

**TABLE 2-3
HISTORIC IMPORTED WATER**

	2000	2001	2002	2003	2004
CMWD	10,967	9,126	11,194	11,757	13,157
Percent of Total Supply	94.8	85.8	87.9	94.2	99.95

Source: District Production Reports.

Imported surface water from CMWD will continue to supplement the local groundwater supply for the District. However, as part of its rate restructuring program, CMWD has developed a new two-tier rate system. Tier 1 rates would apply to allocations for each CMWD purveyor in a take-or-pay arrangement. The amount of Tier 1 allocation will be based on using 90 percent of the maximum deliveries from fiscal years 1989/90 to 2000/01. Based on data supplied by CMWD, the District's highest municipal and industrial deliveries occurred in FY 2001/02 at 8,235 acre-feet. Therefore, the District's Tier 1 allocation is 7,411 acre-feet. Tier 2 rates would apply to

imported water purchases that exceed the Tier 1 allocation. Tier 2 water would be priced at a higher rate than Tier 1 water. Provisions that would allow the District or any of CMWD's purveyors to increase their Tier 1 allocation will be based on a 10-year rolling average of annual Municipal and Industrial (M&I) purchases (excludes agricultural purchases). A copy of the District's supply contract with CMWD is attached as Appendix D to this report.

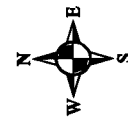
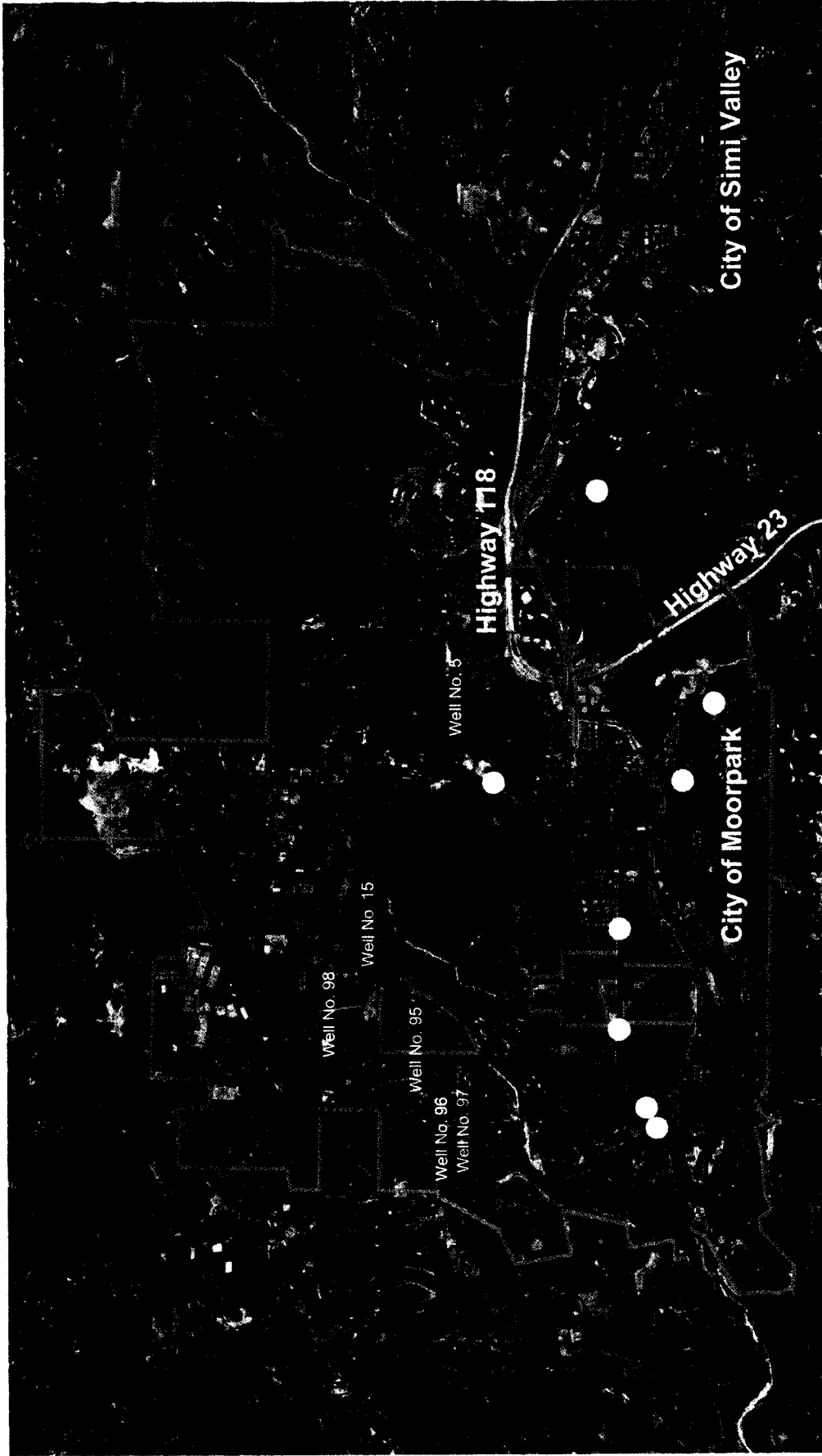
Although there are no guarantees that Tier 1 or Tier 2 water will be available, it is assumed for this analysis that the Tier 1 allocation is reliable under both average and drought conditions. This is consistent with MWD's 2000 Regional UWMP and CMWD's 2000 UWMP, as well as the findings of the *Report on Metropolitan's Water Supplies*. These documents project that MWD is capable of meeting 100 percent of its member agencies' projected supplemental demands (consumptive and replenishment needs) over the next 20 years in average and wet years and meet 100 percent of its member agencies' supplemental demands over the next 10 years in single dry years (MWD, 2002). Under drought conditions, it is assumed that Tier 2 water availability may be subject to cutbacks – potentially to the extent of not being available. These conservative assumptions acknowledge that both CMWD and MWD have undertaken a number of steps to provide increased water supply reliability, but that availability of the supplies, under the most dire circumstances, is not guaranteed.

Such conservative assumptions are buttressed by other conservative assumptions in MWD's and CMWD's planning documents. By way of example, MWD conservatively determined the following: (1) projected that water demands of its member agencies would be higher than the water demands projected by each member agency; (2) identified water supplies currently available to MWD as those projects that have completed environmental review, have funds appropriated or budgeted, have requested or received permits and approvals, and are operationally on-line by a certain date; (3) plans to develop water supplies at least ten years in advance of the need for such water; and (4) established a reserve supply of water under the assumption of State Project Water deliveries of around 20 percent allocation in a single-dry year and 70 percent allocation on average. Such conservative planning objectives allow MWD to continue to provide a reliable supply of water despite any future loss of one particular source of supply.

The District also receives an allocation of imported water through CMWD for agricultural use. This supply is separate and distinct from the Tier 1 and Tier 2 allocations that are used to serve residential, commercial, and industrial users. Based on information from CMWD, the District's annual allocation of agricultural water is 2,733 acre-feet per year. Pricing for this source of supply differs from the Tier 1 and Tier 2 supplies. Agricultural water is priced at a lower rate because it is considered an interruptible supply.

MWD recently issued its *Report on Metropolitan's Water Supplies* with the objective of providing information that would assist member agencies in complying with SB 610. A copy of this report (excluding the appendices) is contained in Appendix E. As the sole source of water for CMWD, MWD's planning is vital to ensuring the District with a reliable source of imported surface water. As part of its Integrated Resource Plan (IRP), the MWD Board of Directors established a water supply reliability objective as follows:



“Through the implementation of the IRP, Metropolitan [MWD] and its member agencies will have the full capability to meet full-service demands at the retail level at all times.”



0.7 0.35 0 0.7 1.4 Miles



Legend

-  VCWWD No. 1 Wells
-  WWTps
-  CMWD Turnouts
-  CMWD Pipelines
-  VCWWD No. 1 Service Area

Kennedy/Jenks Consultants

Ventura County Waterworks District No. 1
2005 Urban Water Management Plan Update

District Water Sources

December 2005
KJ 0589035

Figure 2-1

MWD has developed a water resource strategy to meet this objective. It includes a portfolio of diversified supplies in accordance with the IRP and MWD's Regional Urban Water Management Plan (RUWMP). The IRP established policy guidelines for investing in water conservation, water recycling, desalination, Colorado River deliveries, State Water Project deliveries, water transfers, and storage in groundwater basins and surface reservoirs.

The 1996 IRP and the Report on Metropolitan's Water Supplies have recently been updated. The 2003 Update of the IRP was intended to provide a review of resource development goals and current levels of achievement relative to the 1996 report, identify significant changed conditions that may affect water resource development relative to the 1996 report, and evaluate the reliability of the preferred water resource mix (adjusting targets as necessary to reflect changed conditions and extending the projections through 2025. A copy of this report is attached as Appendix F.

Changed conditions since the 1996 IRP include lower projected retail water demands, higher projected local water resource development, lower projected dry-year MWD demands, MWD Board revised targets for the SWP and the Colorado River Aqueduct, and more stringent water quality regulation, and recognition of implementation risks. Revised sales forecasts and in-depth local supply surveys were also performed and numerous resource programs were completed, identified, and/or abandoned that changed the mix of available resources. However, the major changed condition reflected in the 2003 IRP Update is the reduction in MWD demands compared to the 1996 IRP. The drop in projected MWD demands in 2020 is caused by lower retail demands coupled with higher local supplies, and is one of primary reasons the current targets provide reliability through 2025.

Relative to the projections made for 2020 in the 1996 IRP, the 2003 Update forecasts increases in conservation, water recycling/groundwater recovery/desalination. Colorado River Aqueduct deliveries, SWP deliveries, and Central Valley Project/SWP storage and transfers categories are a buffer of 500,000 acre-feet of resource development that is intended to manage uncertainties inherent in the project planning process and to ensure that the region is able to meet the reliability goal set by the IRP. This buffer represents approximately 10 percent of the projected water demand in 2025 (including conservation). Table 2-4 summarizes the changes between the 1996 IRP and the 2003 Update and the IRP projections for 2025.

**TABLE 2-4
IRP UPDATED RESOURCE TARGETS**

Category	Resource Targets, AF			
	1996 IRP for Year 2020	IRP Update for 2020	Change	IRP Update for Year 2025
Conservation	882,000	1,028,000	+145,600	1,107,000
Recycling/ Groundwater Recovery/ Desalination	500,000	750,000	+250,000	750,000
Colorado River Aqueduct ^(a)	1,200,000	1,250,000	+50,000	1,250,000
State Water Project	593,000	650,000	+57,000	650,000
Groundwater Conjunctive Use	300,000	300,000	0	300,000

Category	Resource Targets, AF			
	1996 IRP for Year 2020	IRP Update for 2020	Change	IRP Update for Year 2025
Central Valley Project/ SWP Storage and Transfers	300,000	550,000	+250,000	550,000
MWD Surface Storage ^(b)	620,000	620,000	0	620,000
Total	4,395,000	5,148,000	+753,000	5,227,000

Notes: (a) The 1,250,000 AF supply is a target for specific year types when needed. MWD is not depending upon a full aqueduct in every year.

(b) Target represents the total amount of water that can be extracted from storage.

CMWD is also taking steps to ensure that it will be able to meet its member agency demands reliably. In response to the urgent need to “drought-proof” its service area and minimize the potentially debilitating effects associated with seismic activity, CMWD is implementing projects like the Aquifer Storage and Recovery Project and Seasonal Storage that will enhance the reliability of its water supply. Each of these programs is described below. In a cooperative effort with MWD, CMWD is developing a storage reservoir in the Las Posas Groundwater Basin. The Las Posas Basin Aquifer Storage and Recovery (ASR) project, which is physically located in the District’s service area, is designed to provide for subsurface storage of up to 300,000 acre-feet of imported water for use to meet emergency, drought, and peak demands.

ASR technology includes dual-purpose, injection/extraction groundwater wells that can store water and subsequently produce the stored water as needed. The project will enable pre-delivery and storage of large volumes of State water in the CMWD service area during periods of availability. The stored water will later be “recovered” or extracted by CMWD to meet seasonal, drought and emergency demands.

The project includes the installation of thirty ASR wells within an approximate nine-square mile area in the Lower Aquifer System of the Las Posas Basin, nearly thirty miles of large diameter pipeline to connect the wells with existing CMWD infrastructure in the cities of Simi Valley and Thousand Oaks, and a combined pump/hydroelectric generation station in the City of Moorpark to facilitate the flow of water to and from the wells. The project will be constructed in phases and is anticipated to be fully operational in 2010. To date, eighteen wells are operational and have allowed for the storage of 60,000 acre-feet into the Lower Aquifer System.

Project facilities will enable the conveyance of water between the well field and distribution system at a rate of 100 cubic feet per second (cfs). This rate is based on an extraction capacity of 3.33 cfs (1,500 gallons per minute) per ASR well. Injection rates are estimated to be slightly lower at 2.66 cfs (1,200 gallons per minute). Given the projected extraction capacity, and assuming twelve months of around-the-clock production, the maximum annual extraction capacity of the project would be on the order of 72,000 acre-feet.

The Las Posas ASR project will provide the following benefits to the District:

- Increases the reliability of CMWD’s drinking water supply by storing large volumes of State water when available for later use.

- Increases the water storage capacity for the CMWD service area. The available storage capacity in the Las Posas Basin is 30 times the capacity of Lake Bard.
- Provides increased operational flexibility in the event of a severe drought or emergency. If the State water supply is either reduced or disrupted entirely, the stored water will be retrieved, treated and delivered to meet CMWD's service area demands.
- Adds a hydroelectric pump station within the District's boundaries.

In addition to the Las Posas ASR project, CMWD is also considering a project to pump and treat water from the South Las Posas Basin. Treatment of this water is necessary to reduce total dissolved solids and chloride concentrations to acceptable levels. It is estimated that approximately 3,000 acre-feet per year of new local water could be developed. The South Las Posas Basin is located on the western edge of the District's service area.

CMWD is also developing a brine line project that will be used to convey reverse osmosis concentrates and other acceptable brines from Simi Valley, Moorpark, Camarillo, and Camrosa to an ocean outfall for disposal. Development of this project will allow agencies in proximity to the brine line to develop groundwater treatment projects that can further enhance the yield of local water supplies. Wholesale water reliability is presented in Table 2-5. In general, the District imports water to meet the difference between demand and available local water supply (i.e., groundwater and recycled water). For a single dry year, agricultural demand is assumed to increase by 18 percent in 2030 and M&I demand by 12 percent from a normal water year for an overall increase of 13 percent. Therefore, the amount of water imported from CMWD will also increase by 12.9 percent for a single dry water year. Similarly, for multi-dry years, agricultural demand is assumed to increase by 19 percent and M&I demand by 14 percent from a normal water year for an overall increase of 14.8 percent. Therefore, imported water supply for a multi-dry year will increase by 14.8 percent from the normal water year. Thus, although the actual volumes of imported water will vary by year, the overall percentages will remain the same.

**TABLE 2-5
WHOLESALE WATER RELIABILITY**

Wholesaler	Single Dry Year	Multiple Dry Years
<i>CMWD (SWP Supply):</i>		
Tier 1 Supply (AF) ^(a)	8,839	9,143
Ag Water (AF) ^(b)	2,557	2,587
Tier 2 (AF) ^(c)	0	0
Total	11,396	11,730
Percent of Normal ^(d)	126	130

Notes: (a) Tier 1 is anticipated to be available at the same level as for a normal water year.
 (b) Ag water was determined from the Ag demand less the 1,008 AF met by recycled water supply up to the District's allocation of 2,733 AF.
 (c) Tier 2 water is assumed to be available to make up differences in supply and demand.
 (d) Supply for 2030 was utilized for this assessment.

Tables 2-6 through 2-8 provide a summary of wholesale demand projections provided to CMWD for the District in a normal, single dry, and multi-dry years, respectfully. Percent of imported

water declines in 2015 due to the completion of the South Las Posas Regional Desalter. The Desalter is discussed in more detail in Section 2.2.1.

**TABLE 2-6
WHOLESALE DEMAND PROJECTIONS PROVIDED TO CMWD
(FOR A NORMAL WATER YEAR)**

	2010	2015	2020	2025	2030
Tier 1 ^(a)	6,985	5,924	7,015	7,015	7,015
Ag Water ^(b)	2,013	2,013	2,013	2,013	2,013
Tier 2 ^(c)	0	0	0	0	0
Total	8,998	7,937	9,028	9,028	9,028
Percent of Total Supply	55.0	43.3	46.5	46.5	46.5

Notes: (a) Tier 1 allocation expected to increase as a result of 10-year running average provision of their contract.
 (b) Ag water was determined from the Ag demand less the 1,008 AF met by recycled water supply up to the District's allocation of 2,733 AF.
 (c) Tier 2 water is assumed to be available to make up differences in supply and demand.

**TABLE 2-7
WHOLESALE DEMAND PROJECTIONS PROVIDED TO CMWD
(FOR A SINGLE DRY WATER YEAR)**

	2010	2015	2020	2025	2030
Tier 1 ^(a)	8,446	7,617	8,839	8,839	8,839
Ag Water ^(b)	2,557	2,557	2,557	2,557	2,557
Tier 2 ^(c)	0	0	0	0	0
Total	11,003	10,174	11,396	11,396	11,396
Percent of Total Supply	59.9	49.5	52.3	52.3	52.3

Notes: (a) Tier 1 allocation expected to increase as a result of 10-year running average provision of their contract.
 (b) Ag water was determined from the Ag demand less the 1,008 AF met by recycled water supply up to the District's allocation of 2,733 AF.
 (c) Tier 2 water is assumed to be available to make up differences in supply and demand.

**TABLE 2-8
WHOLESALE DEMAND PROJECTIONS PROVIDED TO CMWD
(FOR MULTIPLE DRY WATER YEARS)**

	2010	2015	2020	2025	2030
Tier 1 ^(a)	8,689	7,900	9,143	9,143	9,143
Ag Water ^(b)	2,587	2,587	2,587	2,587	2,587
Tier 2 ^(c)	0	0	0	0	0
Total	11,276	10,487	11,730	11,730	11,730
Percent of Total Supply	60.4	50.3	53.0	53.0	53.0

Notes: (a) Tier 1 allocation expected to increase as a result of 10-year running average provision of their contract.
 (b) Ag water was determined from the Ag demand less the 1,008 AF met by recycled water supply up to the District's allocation of 2,733 AF.
 (c) Tier 2 water is assumed to be available to make up differences in supply and demand.

2.1.3 Recycled Water

The District operates the Moorpark Wastewater Treatment Plant (MWTP) which is capable of producing 1.5 million gallons per day (mgd) of disinfected tertiary treated effluent. The District upgraded the treatment plant in 2001, which provided some process modifications. A recycled water distribution system pipeline has been completed to supply the Moorpark Country Club Estate with 1.5 mgd of disinfected tertiary recycled water for golf course irrigation. The District's 1996 Master Plan indicates that the MWTP can be expanded to a 3.0 mgd tertiary treatment plant. The District has prepared an Initial Study in accordance with the California Environmental Quality Act (CEQA) for the expansion of the MWTP. The additional recycled water will be delivered to local agricultural interests with minimal improvements required of the distribution system. Figure 2-1 shows the location of the MWTP. Table 2-9 provides a summary of the projected wastewater flows for the MWTP.

**TABLE 2-9
WASTEWATER COLLECTION AND TREATMENT (AF)**

Type of Wastewater	2000	2005	2010	2015	2020	2025	2030
Wastewater collected & treated in service area	2,460	2,800	3,360	4,110	4,850	5,600	5,600
Volume that meets recycled water standard	1,030	2,800	3,360	3,360	3,360	3,360	3,360

Currently effluent from the MWTP is either treated to secondary standards which is disposed primary by percolation or discharged to the Arroyo Las Posas or treated to tertiary levels and used for recycled water purposes. It is anticipated that future recycled water demand will be evenly divided between agricultural and landscape irrigation use. Table 2-10 provides a summary of the projected disposal of wastewater.

**TABLE 2-10
DISPOSAL OF WASTEWATER (AFY)**

Method of Disposal	Treatment Level	2005	2010	2015	2020	2025	2030
Percolated/ Discharge to Arroyo Las Posas	Secondary	1,792	1,344	2,094	2,834	3,584	3,584
Recycled Water Users	Disinfected Tertiary	1,008	2,016	2,016	2,016	2,016	2,016
Total		2,800	3,360	4,110	4,850	5,600	5,600

In 2003, 150 AF was served for irrigation purposes and in 2004 approximately 552 AF was served for irrigation purposes. Much less than the 1,008 AF projected for 2005 in the 2000 UWMP.

Additional recycled water is available from the Ventura County Waterworks District No. 8 (District No. 8). As part of the North Park Village development, recycled water from the Simi

Valley Water Quality Plant (SVWQP) may be utilized to meet the development's irrigation needs. Estimated irrigation demand for the development are estimated to be 1,179 AFY. In addition to serving North Park, the SVWQP, which has sufficient capacity, could also serve Moorpark College and the Rustic Canyon Golf Course. The demands from these two users could increase the District use of recycled water by 600 AFY.

2.1.4 Inconsistent Water Supplies

The District utilizes several supplies which are available on an inconsistent basis due mainly to climatic effects. These include groundwater conservation credits, Tier-2 water, and In-Lieu water from the Groundwater Storage Program.

2.1.4.1 Groundwater Conservation Credits

The volume of groundwater conservation credits available to the District varies each year dependent upon the amount of groundwater pumped in previous years. Groundwater conservation credits accrue when the District does not pump its maximum allocation from the North Las Posas Basin. The District's strategy towards the use of groundwater is to minimize pumping during wet years when imported water is readily available and thus accruing credits for future dry years. However, availability in dry years is dependent upon groundwater levels.

2.1.4.2 Groundwater Storage Program (In-lieu)

In addition to the sources discussed above, the District currently utilizes an In-lieu groundwater storage program to build an additional source for dry years. This water is delivered through CWMD and the volume available in any given year is dependent on previous water production.

2.2 Planned Water Supplies

In order to ensure water supply reliability and reduce the District's dependence on imported water, the following are planned sources of water.

2.2.1 South Los Posas Regional Desalter

The South Las Posas Basin Regional Desalter would be a 5 million gallon per day (mgd) brackish groundwater treatment facility. The desalter would be located in Moorpark. Reverse osmosis (RO) treatment technology would be used to produce potable quality water. Brine waste, containing concentrated salts from the RO process, would be discharged to the Calleguas Brineline and exported out of the Calleguas Creek Watershed (Watershed).

The area currently receives a combination of local groundwater and imported water to its customers. The South Las Posas Groundwater Basin has been virtually full since 1983. Despite the availability of water and the presence of potential users, the relatively high total dissolved solids (TDS) and chloride concentrations in the groundwater require that the water be treated before it can be used for potable purposes. The construction of desalters, like the South Las Posas Basin Regional Desalter, would allow brackish water that is currently unusable to be used beneficially, increasing water supply reliability, and removing salts through brine disposal outside of the Watershed.

An Initial Study for the Desalter is expected to be prepared in 2006 with operation expected to begin in December 2009. Table 2-11 provides a summary of the projected availability of water from the Desalter project and its percent of total supply for a normal water year.

**TABLE 2-11
PROJECTED USE OF DESALTED WATER**

	2010	2015	2020	2025	2030
South Las Posas Desalter	2,000	5,000	5,000	5,000	5,000
Percent of Total Supply	12.2	27.3	25.7	25.7	25.7

2.2.2 Transfers and Exchanges

At this time, there are no potential transfer and exchange opportunities available to the District that would be economically feasible.

2.3 Summary of Supplies

Table 2-12 provides a summary of the water sources and quantities over the 25-year planning period, in 5-year increments for a normal water year.

**TABLE 2-12
CURRENT AND PLANNED WATER SUPPLIES (AFY)**

Water Supply Sources	2010	2015	2020	2025	2030
<i>Existing Supplies</i>					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	8,998	7,937	9,028	9,028	9,028
Recycled Water	2,016	2,016	2,016	2,016	2,016
Total Existing Supply	13,197	12,136	13,227	13,227	13,227
<i>Planned Supplies</i>					
Desalted Groundwater	2,000	5,000	5,000	5,000	5,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	3,179	6,179	6,179	6,179	6,179
Total Existing and Planned Supply	16,376	18,315	19,406	19,406	19,406

2.4 Water Quality

The District provides water of good quality to its customers. Local groundwater from the North Las Posas Basin may be treated for iron and manganese or just chlorinated depending on the well. As discussed above, groundwater from the South Las Posas Basin has high levels of TDS and chlorides and requires treatment prior to potable use and as such has not been utilized by the District. However, with the implementation of the Regional Desalter, this supply will become available. A copy of the District's 2004 Consumer Confidence Report, which summarizes the District's water quality, is provided in Appendix G. The District does not anticipate the loss of any of their current or planned supplies due to water quality impacts.

Section 3: Water Use

This section describes historic/current water usage and the methodology used to project future demands within the District's service area. Water usage is divided into sectors such as: residential, industrial, institutional/governmental, landscape/recreational, agricultural, and other purposes.

3.1 Historic/Current Water Use

The District's water supply for the last twenty years is shown in Table 3-1. The data indicates that while demand has been fairly steady, the proportion of the supply coming from imported sources (CMWD) has increased. Due to the FCGMA imposed cutbacks in groundwater allocation this trend is expected to continue as the District's demands increase.

**TABLE 3-1
DISTRICT WATER PRODUCTION**

Calendar Year	District Wells (acre-feet)	CMWD (acre-feet)	Total (acre-feet)
1984	3,122	7,076	10,198
1985	2,291	7,485	9,775
1986	2,707	7,145	9,852
1987	2,848	8,157	11,006
1988	3,079	9,065	12,144
1989	3,218	9,358	12,576
1990	3,298	9,672	12,970
1991	1,891	7,773	9,664
1992	1,428	8,063	9,492
1993	1,252	8,550	9,802
1994	2,301	7,895	10,196
1995	2,283	7,411	9,694
1996	174	10,080	10,254
1997	1,029	10,213	11,242
1998	1,855	7,443	9,298
1999	2,598	8,712	11,310
2000	604	10,967	11,570
2001	1,512	9,126	10,638
2002	1,539	11,194	12,733
2003	721	11,757	12,478
2004	8	13,157	13,175
Average	1,893	9,062	10,956

Source: District production records.

3.2 Other Factors Affecting Water Usage

Two major factors that affect water usage are weather and water conservation. Historically, when the weather is hot and dry, water usage increases. The amount of increase varies according to the number of consecutive years of hot dry weather and the conservation activities imposed. During cool-wet years, historical water usage has decreased to reflect less water usage for external landscaping. Water conservation measures employed within the District's service area have a direct long-term effect on water usage. Both of these factors are discussed below in detail.

3.2.1 Weather Effects on Historical Water Usage

Historically, both agricultural and urban usage have increased in dry weather. However, in recent years, conservation efforts limit increases in demand due to higher temperatures and often reduce overall demand. Further effects due to global warming may also begin to influence future water usage and planning efforts as previously discussed in Section 1.

3.2.2 Conservation Effects on Water Usage

In recent years, water conservation has become an increasingly important factor in water supply planning in California. The California plumbing code has instituted requirements for new construction that mandate the installation of ultra low-flow toilets and low-flow showerheads. As a signatory to the CUWCC MOU, the District has participated in water conservation measures that include public information and education programs and the implementation of water efficient operations and maintenance practices.

3.3 Projected Water Demands

The District's population projections, as presented in Section 1, are shown in Table 3-2.

**TABLE 3-2
POPULATION PROJECTION**

	2004	2010	2015	2020	2025	2030
Population ^(a)	35,500	40,060	44,790	49,520	49,520	49,520

Note: (a) The 2020 population is the projected build-out population from the City's General Plan. No growth past 2020 is assumed.

**TABLE 3-3
PROJECTED SERVICE CONNECTIONS**

Water Use Sector	2004	2010	2015	2020	2025^(a)	2030^(a)
Residential (single- and multi-family)	9,067	10,826	12,551	13,521	13,521	13,521
Commercial	211	252	292	315	315	315
Industrial	72	86	100	107	107	107
Institutional	133	159	184	198	198	198
Agricultural	171	171	171	171	171	171
Construction	1	1	1	2	2	2
Others (Fire and Hydrant use)	237	283	328	353	353	353
Total	9,892	11,778	13,627	14,667	14,667	14,667

Note: (a) Values for 2025 and 2030 were held constant as the City's General Plan assumes build-out in 2020.

District water demands were derived on a per-connection basis. Projections assumed a 3 percent growth rate in M&I accounts until 2015 and a 1.5 percent increase in M&I accounts until 2020. Build-out is expected to occur in 2020, per the City's General Plan, thus no growth past 2020 was expected. Furthermore, agricultural demand is expected to remain constant. Table 3-3 presents the projected number of service connections by connection type.

Table 3-4 summarizes the projected water demand by connection type using the same assumptions as for the number of service connections.

**TABLE 3-4
DISTRICT WATER DEMAND PROJECTIONS^(a)**

Water Use Sector	2004	2010	2015	2020	2025	2030
Residential (single and multi-family)	7,289	9,393	10,889	11,730	11,730	11,730
Commercial	721	929	1,077	1,160	1,160	1,160
Industrial	260	334	388	418	418	418
Institutional	894	1,152	1,335	1,439	1,439	1,439
Agricultural	3,484	3,021	3,021	3,021	3,021	3,021
Construction	1	1	1	1	1	1
Others (Fire and Hydrant)	284	367	425	458	458	458
Total	12,933	15,197	17,136	18,227	18,227	18,227

Note: (a) All values rounded up to the nearest 1 AF.

Annual consumption rates by service connection type, based on the projected demands and projected number of connections, are as follows:

- Residential 0.87 acre-feet per connection
- Commercial 3.69 acre-feet per connection
- Institutional 7.25 acre-feet per connection
- Industrial 3.89 acre-feet per connection
- Agricultural 17.67 acre-feet per connection
- Construction 0.53 acre-feet per connection
- Others (Fire and Hydrant) 1.30 acre-feet per connection

Agricultural demands in the District's service area are met with interruptible supplies from CMWD. This designation means that water supplied to these users are at a reduced water rate with a requirement that the supplies can be curtailed at any time at the discretion of the supplier.

Section 4: Water Supply Reliability Planning

This Section provides a discussion of the reliability of the water supply within the District's service area. A comparison between the water supply and demand for an average water year, single-dry water year, and multi-dry water years is also provided.

4.1 Reliability

Reliability is "how much one can count on a certain amount of water being delivered to a specific place at a specific time" and depends on the availability of water from the source, availability of the means of conveyance and level and pattern of water demand at the place of delivery.

Reliability criteria define the maximum acceptable level of supply shortage an agency is willing to sustain during a drought. For this study, a reliability criterion has been used to evaluate water supply plans. This criterion requires water supply to be sufficient to meet projected demands 90 percent of the time. In the remaining 10 percent of the time, it is assumed that the maximum allowable supply shortage will be 10 percent of the demand. This level is chosen because a 10 percent water demand reduction is anticipated to be attainable by voluntary conservation. Typically when a shortage occurs, water customers increase their awareness of water usage and voluntarily reduce water demands, avoiding water rationing.

4.2 Plan to Assure Reliable Water Supply

Recognizing its dependence on imported water supplies and the need to improve water supply reliability during drought events, the District has indicated a preference to using the following sources of supply (in following order of preference):

- CMWD Tier 1 water
- CMWD agricultural water (when available)
- Recycled water from the District
- Recycled Water from Simi Valley (when available)
- Desalted Groundwater (after the project is complete)
- Groundwater from the District's well
- CMWD Tier 2 water

Using this approach will allow the District to reserve its local groundwater supplies until needed, potentially generating additional groundwater conservation credits that could be used during drought conditions when other supplies may not be available.

4.3 Reliability Comparison

The Urban Water Management Planning Act requires an assessment of water supply reliability and vulnerability to seasonal or climatic shortage. Reliability is a measure of a water service system's anticipated success in managing water shortages. This assessment must include a comparison of the total projected water demand with the supply available for the following conditions: (1) average water year, (2) single dry water year, and (3) three consecutive dry years. A detailed break down of the District's annual water supply and demand projections is provided in Appendix H.

4.3.1 Normal Year Supply and Demand

A summary of the District's projected 20-year water supplies and demands for normal conditions is provided in Table 4-1. The table assumes that the District's Tier 1 allocation will increase as a function of the 10-year rolling average of M&I purchases. This increase is consistent with its contract with CMWD, as well as CMWD's long-term contract with MWD. Further, such increases in demand were accounted for in MWD's UWMP and CMWD's UWMP. The District will observe a decrease in imported water use in 2015 due to the implementation of the Regional Desalter in that year. As the table shows, the District would still be able to meet its customer's demands through 2030.

**TABLE 4-1
NORMAL YEAR SUPPLY AND DEMAND COMPARISON**

	2010	2015	2020	2025	2030
Existing Water Supplies					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	8,998	7,937	9,028	9,028	9,028
Recycled Water	2,016	2,016	2,016	2,016	2,016
Total Existing Supply	13,197	12,136	13,227	13,227	13,227
Planned Water Supplies					
Desalted Groundwater	2,000	5,000	5,000	5,000	5,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	3,179	6,179	6,179	6,179	6,179
Total Existing and Planned Supplies	16,376	18,315	19,406	19,406	19,406
Agricultural Demand	3,021	3,021	3,021	3,021	3,021
Municipal and Industrial Demand	12,176	14,115	15,206	15,206	15,206
Total Demand	15,197	17,136	18,227	18,227	18,227
Difference (supply minus demand)	1,179	1,179	1,179	1,179	1,179
Difference as Percent of Supply	8.0	7.2	6.4	6.4	6.4
Difference as Percent of Demand	8.7	7.8	6.9	6.0	6.0

4.4 Single Dry Year Supply and Demand

A summary of the District's projected 20-year water supplies for a single dry-year condition is provided in Table 4-2. Single dry year conditions are expected to result in an increase of 18 percent in agricultural demand and 12 percent in M&I demand, for an overall increase of 12.9 percent in total demand based on a review of historical rainfall and demand data. With existing supplies and the implementation of the Regional Desalter, the District will have sufficient supply to meet with 2030 demand.

**TABLE 4-2
SINGLE DRY YEAR SUPPLY AND DEMAND COMPARISON**

	2010	2015	2020	2025	2030
Existing Water Supplies					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	11,003	10,174	11,396	11,396	11,396
Recycled Water	2,016	2,016	2,016	2,016	2,016
Total Existing Supply	15,202	14,373	15,595	15,595	15,595
Planned Water Supplies					
Desalted Groundwater	2,000	5,000	5,000	5,000	5,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	3,179	6,179	6,179	6,179	6,179
Total Existing and Planned Supplies	18,381	20,552	21,744	21,744	21,744
Agricultural Demand	3,565	3,565	3,565	3,565	3,565
Municipal and Industrial Demand	13,637	15,808	17,030	17,030	17,030
Total Demand	17,202	19,373	20,595	20,595	20,595
Difference (supply minus demand)	1,179	1,179	1,179	1,179	1,179
Difference as Percent of Supply	6.4	5.7	5.4	5.4	5.4
Difference as Percent of Demand	6.9	6.1	5.7	5.7	5.7

4.5 Multi-Dry Year Supply and Demand

A summary of the District's projected 20-year water supplies for multi dry-year conditions is provided in Tables 4-3 through 4-7. Multi dry year conditions are expected to result in an increase of 19 percent in agricultural demand and 14 percent in M&I demand for an overall increase of 14.8 percent in total demand based on a review of historical rainfall and demand data. With existing supplies and the implementation of the Regional Desalter, the District will have sufficient supply to meet with 2030 demand.

**TABLE 4-3
MULTI DRY YEAR SUPPLY AND DEMAND COMPARISON (2006-2010)**

	2006	2007	2008	2009	2010
Existing Water Supplies					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	12,612	12,994	13,375	13,757	11,276
Recycled Water	1,008	1,008	1,008	1,008	2,016
Total Existing Supply	15,927	16,297	16,678	17,071	15,475
Planned Water Supplies					
Desalted Groundwater	0	0	0	0	2,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	1,179	1,179	1,179	1,179	3,179
Total Existing and Planned Supplies	17,106	17,476	17,857	18,250	18,654
Agricultural Demand	3,595	3,595	3,595	3,595	3,595
Municipal and Industrial Demand	12,332	12,702	13,083	13,476	13,880
Total Demand	15,927	16,297	16,678	17,071	17,475
Difference (supply minus demand)	1,179	1,179	1,179	1,179	1,179
Difference as Percent of Supply	6.9	6.7	6.6	6.5	6.3
Difference as Percent of Demand	7.4	7.2	7.1	6.9	6.7

**TABLE 4-4
MULTI DRY YEAR SUPPLY AND DEMAND COMPARISON (2011-2015)**

	2011	2012	2013	2014	2015
Existing Water Supplies					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	10,943	10,872	10,813	10,768	10,487
Recycled Water	2,016	2,016	2,016	2,016	2,016
Total Existing Supply	15,142	15,071	15,012	14,967	14,686
Planned Water Supplies					
Desalted Groundwater	2,750	3,250	3,750	4,250	5,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	3,929	4,429	4,929	5,429	6,179
Total Existing and Planned Supplies	19,071	19,500	19,941	20,396	20,865
Agricultural Demand	3,595	3,595	3,595	3,595	3,595
Municipal and Industrial Demand	14,297	14,726	15,167	15,622	16,091
Total Demand	17,892	18,321	18,762	19,217	19,686
Difference (supply minus demand)	1,179	1,179	1,179	1,179	1,179
Difference as Percent of Supply	6.2	6.0	5.9	5.8	5.7
Difference as Percent of Demand	6.6	6.4	6.3	6.1	6.0

**TABLE 4-5
MULTI DRY YEAR SUPPLY AND DEMAND COMPARISON (2016-2020)**

	2016	2017	2018	2019	2020
Existing Water Supplies					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	9,797	10,259	10,735	11,225	11,730
Recycled Water	2,016	2,016	2,016	2,016	2,016
Total Existing Supply	13,996	14,458	14,934	15,424	15,929
Planned Water Supplies					
Desalted Groundwater	5,000	5,000	5,000	5,000	5,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	6,179	6,179	6,179	6,179	6,179
Total Existing and Planned Supplies	20,175	20,637	21,113	21,603	22,108
Agricultural Demand	3,595	3,595	3,595	3,595	3,595
Municipal and Industrial Demand	15,401	15,863	16,339	16,829	17,334
Total Demand	18,996	19,458	19,934	20,424	20,929
Difference (supply minus demand)	1,179	1,179	1,179	1,179	1,179
Difference as Percent of Supply	5.8	5.7	5.6	5.5	5.3
Difference as Percent of Demand	6.2	6.1	5.9	5.8	5.6

**TABLE 4-6
MULTI DRY YEAR SUPPLY AND DEMAND COMPARISON (2021-2025)**

	2021	2022	2023	2024	2025
Existing Water Supplies					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	11,730	11,730	11,730	11,730	11,730
Recycled Water	2,016	2,016	2,016	2,016	2,016
Total Existing Supply	15,929	15,929	15,929	15,929	15,929
Planned Water Supplies					
Desalted Groundwater	5,000	5,000	5,000	5,000	5,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	6,179	6,179	6,179	6,179	6,179
Total Existing and Planned Supplies	22,108	22,108	22,108	22,108	22,108
Agricultural Demand	3,595	3,595	3,595	3,595	3,595
Municipal and Industrial Demand	17,334	17,334	17,334	17,334	17,334
Total Demand	20,929	20,929	20,929	20,929	20,929
Difference (supply minus demand)	1,179	1,179	1,179	1,179	1,179
Difference as Percent of Supply	5.3	5.3	5.3	5.3	5.3
Difference as Percent of Demand	5.6	5.6	5.6	5.6	5.6

**TABLE 4-7
MULTI DRY YEAR SUPPLY AND DEMAND COMPARISON (2025-2030)**

	2026	2027	2028	2029	2030
Existing Water Supplies					
Groundwater	2,183	2,183	2,183	2,183	2,183
Imported Water	11,730	11,730	11,730	11,730	11,730
Recycled Water	2,016	2,016	2,016	2,016	2,016
Total Existing Supply	15,929	15,929	15,929	15,929	15,929
Planned Water Supplies					
Desalted Groundwater	5,000	5,000	5,000	5,000	5,000
Simi Valley Recycled Water	1,179	1,179	1,179	1,179	1,179
Total Planned Supply	6,179	6,179	6,179	6,179	6,179
Total Existing and Planned Supplies	22,108	22,108	22,108	22,108	22,108
Agricultural Demand	3,595	3,595	3,595	3,595	3,595
Municipal and Industrial Demand	17,334	17,334	17,334	17,334	17,334
Total Demand	20,929	20,929	20,929	20,929	20,929
Difference (supply minus demand)	1,179	1,179	1,179	1,179	1,179
Difference as Percent of Supply	5.3	5.3	5.3	5.3	5.3
Difference as Percent of Demand	5.6	5.6	5.6	5.6	5.6

Section 5: Water Demand Management Measures

This Section will discuss the existing and planned Demand Management Measures (DMMs) implemented by the District.

5.1 Water Demand Management Measures

As outlined below, the UWMP Act requires water suppliers to implement “demand management” in their UWMP through a five step process. “Demand management,” as applied to water conservation, refers to the use of measures, practices, or incentives implemented by water utilities to permanently reduce the level or change the pattern of demand. Per California Water Code (CWC) §10631(f) and (g), UWMPs must include:

1. A description of each water demand management measure being implemented, or scheduled for implementation:
 - DMM 1. Water survey programs for single-family residential and multifamily residential customers.
 - DMM 2. Residential plumbing retrofit.
 - DMM 3. System water audits, lead detection, and repair.
 - DMM 4. Metering with commodity rates for all new connections and retrofit of existing connections.
 - DMM 5. Large landscape conservation programs and incentives.
 - DMM 6. High-efficiency washing machine rebate programs.
 - DMM 7. Public information programs.
 - DMM 8. School education programs.
 - DMM 9. Conservation programs for commercial, industrial, and institutional accounts.
 - DMM 10. Wholesale agency programs.
 - DMM 11. Conservation pricing.
 - DMM 12. Water conservation coordinator.
 - DMM 13. Water waste prohibition.
 - DMM 14. Residential ultra-low-flush toilet replacement programs.
2. A schedule of implementation for all water DMMs proposed or described in the water supplier’s UWMP.

3. A description of the methods, if any, the water supplier will use to evaluate the effectiveness of the DMMs implemented or described under the UWMP.
4. An estimate, if available, of existing conservation savings on water use within the water supplier's service area and the effect of the savings on the supplier's ability to further reduce demand.
5. An evaluation of each DMM not being implemented or scheduled for implementation, which shall include cost-benefit, funding availability, and legal authority analyses.

The UWMP Act allows one of two ways for water utilities to provide DMM information so as to meet the respective requirements of CWC §10631(f) and (g):

- Signatory. A water supplier who is a member of the California Urban Water Conservation Council (CUWCC) and signatory of the *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) may submit their Best Management Practice (BMP) Activity Reports (Annual Reports). Signatories pledge to develop and implement the 14 BMPs that are intended to reduce long-term urban water demands. These BMPs are functionally-equivalent to the DMMs in CWC §10631(f)(1).

It should be noted that exemptions are available for BMPs that cannot be implemented; certain criteria must be met regarding cost-effectiveness, budgetary constraints, or legal issues that prohibit the implementation of any BMP for a signatory.

- Non-signatory. A water supplier who is not a member of CUWCC - or who is a member of CUWCC, but chooses not to submit the Annual Reports - must discuss all 14 DMMs, along with any additional measures the supplier is implementing or has scheduled for implementation in their UWMP submittal.

5.2 Implementation Levels of DMMs/BMPs

The DMMs which were implemented, or scheduled to be implemented, by the District are outlined below.

District has been a signatory to the CUWCC MOU since August 1991 and, as such, is a member of CUWCC. According to the recently updated CUWCC database, which is made available to the public at http://bmp.cuwcc.org/bmp/read_only/home.lasso?rui=233, the District has implemented or plans to implement all 14 DMMs for 2005. Copies of the District's Best Management Practices Activity Reports are provided in Appendix I. These reports contain all the necessary information to meet with the Act requirements.

Section 6: Water Shortage Contingency Plan

This water shortage contingency analysis is based on water shortages that arise not only from drought, but shortages resulting from earthquakes, fires, system failures, and water quality contamination as well. Recent drought-related water management experiences for water agencies in California have revealed the complexity of coping with a water supply shortage. These experiences are well-documented and ready for implementation in the future by most agencies. Various water shortage scenarios may require similar drought-related actions, but may involve different complications that must be taken into account to address the shortage.

6.1 Minimum Water Supply

Based on normal demands during drought years, the minimum three-year water supply is provided in Table 6-1. Three years is the estimated minimum time for a multi-year drought consistent with the approach used in the development of UWMPs. Base years 2006, 2007 and 2008 were assumed since they represent a period when recycled water and desalted groundwater supplies would yet to be fully implemented. Furthermore, a conservative estimate of no groundwater credits or availability of CMWD agricultural or Tier 2 water were assumed.

TABLE 6-1
THREE YEAR ESTIMATED MINIMUM WATER SUPPLY (AF)

Source	Year 1	Year 2	Year 3
Groundwater ^(a)	2,183	2,183	2,183
Imported Water	7,411	7,411	7,411
District Recycled Water ^(b)	1,210	1,412	1,614
SVWQP Recycled Water ^(b)	1,179	1,179	1,179
Desalted Groundwater ^(c)	0	0	0
Total Supply	11,983	12,185	12,387
Percent of Normal	73.2	74.4	75.6

Notes:

- (a) Groundwater capacity assumes the full FCGMA allocation is available. No pumping of groundwater conservation credits is assumed.
- (b) Recycled water supplies are based on anticipated levels.
- (c) The District's current Tier 1 allocation only is expected to be available.
- (d) Base Year 2010 was assumed as normal year.

6.2 Drought Conditions

Being located within an arid region of Southern California, the District is highly susceptible to drought conditions. Thus it is important to have a plan in place to ease the impacts to the water supply during times of drought. The DMMs discussed in Section 5 will play an essential role in limiting water use during drought times.

6.3 Earthquakes or Other Natural Disaster

The District is located in an earthquake zone. In the event of an earthquake or natural disaster, the District has the potential of losing its imported water supply. If such a delay occurs, the District could temporarily increase its groundwater production and utilize its emergency storage to meet water demands until the damage was repaired and the supply restored. In the event of a prolonged absence, the District could implement their established "No Waste" Ordinance and Incremental Interruption Plan (IIP) to substantially reduce demands until supply is restored. Both of these measures are discussed below.

6.4 Contamination

Contamination of water supply can result from a number of different events including, a reduction in water supply, water main break, cross-connection condition, water source pollution or covert action. Water supplies for the District are generally of good quality and no foreseeable permanent contamination issues are anticipated. In the event of a toxic spill or major contamination, the District would isolate the problem and reduce the impact to the water supply. Once the problem has been isolated, the contamination would be cleaned up using chlorination or other necessary procedures and the water supply returned to service as soon as possible. In the meantime, emergency storage or alternative supply would be used to meet demand. Implementation of additional demand management measures could also be utilized if the outage is anticipated to be of longer consequence.

6.5 Stages of Action

Water shortages can be triggered by a hydrologic limitation in supply (i.e., a prolonged period of below normal precipitation and runoff), limitations or failure of supply and treatment infrastructure, or both. As a result of severe drought conditions and Assembly Bill No. 11, the District adopted a Water Shortage Contingency Plan in January 1992. This plan established two major components. First, it provides for a three-stage IIP, ranging from voluntary to mandatory reductions. The most severe mandatory reduction, or Level 3, would reduce residential, commercial, and industrial demands by 30 percent, and agricultural demands by 60 percent. Second, it confirms that the District's present rates are adequate for operation during a water shortage. A copy of the Water Shortage Contingency Plan is provided in Appendix J.

Table 6-2 summarizes the shortage stages and conditions.

**TABLE 6-2
STAGES OF ACTION**

Level	1	2	3
Anticipated Shortage that Triggers Phase	10%	26%	50%
Reduction in M&I demand	10%	20%	30%
Reduction in Ag demand	10%	40%	60%
Total Reduction	10%	15%	25%
Type of Rationing	Voluntary	Mandatory	Mandatory

Note: Numbers to be updated for Final.

6.5.1.1 Prohibitions, Consumption Reduction Methods and Penalties

There is a "No Waste" Ordinance currently in effect for the Ventura County. Table 6-3 provides a summary of the consumption methods and the stages in which they would take effect.

**TABLE 6-3
CONSUMPTION REDUCTION METHODS**

Consumption Reduction Methods	Stages Method Takes Effect
Demand reduction program	All Stages
Restrict building permits	3
Use prohibitions	All Stages
Water shortage pricing	All Stages
Voluntary rationing	1
Mandatory rationing	3
Education program	All Stages
Percentage reduction by customer type	All Stages

Penalties imposed for the various stages are as described in the Water Shortage Contingency Plan.

6.5.1.2 Revenue and Expenditure Impacts

An assessment of the revenue impacts as a result of the various stages is described in the Water Shortage Contingency Plan. The assessment showed that with the use of a Rate Stabilization Fund, the District would have sufficient funds to cover a water shortage without the need to increase water rates.

6.5.1.3 Reduction Measuring Mechanism

In order to monitor the reduction in water use during a water shortage stage, supply and demand data is reported on a monthly basis with excess use violations reported to the County and to the customer. Bi-monthly water meter readings are collected and complied to determine if the water usage meets the target goal.

Section 7: Conclusions

The District currently uses three water sources (imported surface water from CMWD, groundwater from its own wells, and recycled water) to meet customer demands. CMWD and its wholesaler, MWD, have taken steps to diversify their existing water supply resources to enhance service reliability to the District's water customers. An update the 1996 MWD Integrated Water Resource Plan indicates that based on consideration of changed conditions and reduced demands, that MWD's water resources are sufficient to attain supply reliability out to 2025. Recognizing the importance of diversifying its own available water resources, the District is planning on expanding its recycled water distribution system to provide approximately 11 percent of its total 2025 demand as well as implementing a Regional Groundwater Desalter.

In addition, the District is pursuing additional recycled water supplies from Simi Valley which has the existing capacity to provide such a supply. These supplies could serve approximately 10 percent of District's 2025 demands. A feasibility study indicates that development of this recycled water supply appears economically viable and the District is optimistic based on favorable discussions with both CMWD and Simi Valley that recycled water will be available.

Based on the analysis set forth in this UWMP update, the District's total projected water supplies available during the ensuing twenty years will meet the projected water demands within the District's service area for normal, single dry, and multi dry water years.

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- Ventura County Waterworks District No. 1. 2000. Urban Water Management Plan.

Appendix A

Urban Water Management Planning Act

Established: AB 797, Klehs, 1983

Amended: AB 2661, Klehs, 1990

AB 11X, Filante, 1991

AB 1869, Speier, 1991

AB 892, Frazee, 1993

SB 1017, McCorquodale, 1994

AB 2853, Cortese, 1994

AB 1845, Cortese, 1995

SB 1011, Polanco, 1995

AB 2552, Bates, 2000

SB 553, Kelley, 2000

SB 610, Costa, 2001

AB 901, Daucher, 2001

SB 672, Machado, 2001

SB 1348, Brulte, 2002

SB 1384, Costa, 2002

SB 1518, Torlakson, 2002

AB 105, Wiggins, 2004

SB 318, Alpert, 2004

CALIFORNIA WATER CODE DIVISION 6 PART 2.6. URBAN WATER MANAGEMENT PLANNING

CHAPTER 1. GENERAL DECLARATION AND POLICY

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in

its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
 - (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
 - (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
 - (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
 - (9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.
- (b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

- (a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
- (b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- (c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

CHAPTER 2. DEFINITIONS

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

CHAPTER 3. URBAN WATER MANAGEMENT PLANS

Article 1. General Provisions

10620.

- (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

- (b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d)
 - (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.
 - (2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
- (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621.

- (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.
- (b) Every urban water supplier required to prepare a plan pursuant to this part shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

Article 2. Contents of Plans

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

- (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.
- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

- (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.
- (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.

For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

- (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

- (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:
 - (1) An average water year.
 - (2) A single dry water year.
 - (3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

- (d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.
- (e)
 - (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:
 - (A) Single-family residential.
 - (B) Multifamily.
 - (C) Commercial.
 - (D) Industrial.
 - (E) Institutional and governmental.
 - (F) Landscape.
 - (G) Sales to other agencies.
 - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
 - (I) Agricultural.
 - (2) The water use projections shall be in the same five-year increments described in subdivision (a).

- (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
 - (1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:
 - (A) Water survey programs for single-family residential and multifamily residential customers.
 - (B) Residential plumbing retrofit.
 - (C) System water audits, leak detection, and repair.
 - (D) Metering with commodity rates for all new connections and retrofit of existing connections.
 - (E) Large landscape conservation programs and incentives.
 - (F) High-efficiency washing machine rebate programs.
 - (G) Public information programs.
 - (H) School education programs.
 - (I) Conservation programs for commercial, industrial, and institutional accounts.
 - (J) Wholesale agency programs.
 - (K) Conservation pricing.
 - (L) Water conservation coordinator.
 - (M) Water waste prohibition.
 - (N) Residential ultra-low-flush toilet replacement programs.
 - (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
 - (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

- (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
- (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
 - (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
 - (2) Include a cost-benefit analysis, identifying total benefits and total costs.
 - (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
 - (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
- (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- (j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council

in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

- (k) Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c), including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

10631.5. The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities.

10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

- (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.
- (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
- (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including,

but not limited to, a regional power outage, an earthquake, or other disaster.

- (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
- (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f) Penalties or charges for excessive use, where applicable.
- (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
- (h) A draft water shortage contingency resolution or ordinance.
- (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

- (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Article 2.5 Water Service Reliability

10635.

- (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.
- (b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

- (c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.
- (d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Articl 3. Adoption and Implementation of Plans

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644.

- (a) An urban water supplier shall file with the department and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be filed with the department and any city or county within which the supplier provides water supplies within 30 days after adoption.
- (b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the

status of the plans adopted pursuant to this part. The report prepared by the department shall identify the outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

CHAPTER 4. MISCELLANEOUS PROVISIONS

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

- (a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.
- (b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities

Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

10657.

- (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.
- (b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

Appendix B

Notice of Public Hearing and Resolution of Adoption

**A RESOLUTION OF THE BOARD OF SUPERVISORS
ADOPTING THE 2005 URBAN WATER MANAGEMENT PLAN**

WHEREAS, on January 1, 1983, the Urban Water Management Planning Act went into effect requiring preparation and update of Water Management Plans, by urban water purveyors serving a specified number of customers; and

WHEREAS, Ventura County Waterworks District (VCWD) No. 1 is required to comply with the requirements of the Act and must update its 2000 Urban Water Management Plan for its service area; and

WHEREAS, the Ventura County Board of Supervisors continues to support water reclamation and conservation activities for VCWD No. 1; and

WHEREAS, the people served by VCWD No. 1 will benefit from the implementation of effective water reclamation and conservation programs that help to ensure a reliable water supply.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors adopts the 2005 Urban Water Management Plan for VCWD No. 1.

BE IT FURTHER RESOLVED, that the Board of Supervisors declares its intent to continue its support of the water reclamation and conservation activities provided for in the 2005 Urban Water Management Plan for VCWD No. 1.

PASSED AND ADOPTED THIS 13th day of December, 2005 by the following vote:

Ayes: Supervisors	_____

Noes:	_____
Absent:	_____

ATTEST:

JOHN F. JOHNSTON
Clerk of the Board of Supervisors
County of Ventura, State of California

VENTURA COUNTY WATERWORKS
DISTRICT NO. 1

By _____
Deputy Clerk of the Board

By _____
Chair, Board of Supervisors

**VENTURA COUNTY WATERWORKS DISTRICT NO. 1
A NOTICE OF HEARING CONCERNING
ADOPTION OF THE URBAN WATER MANAGEMENT PLAN**

NOTICE IS HEREBY GIVEN that, pursuant to Government Code Section 6062a, a hearing will be held December 13, 2005, at 10:00 a.m. in the meeting room of the Board of Supervisors, Administration Building, Government Center, 800 South Victoria Avenue, Ventura, California, concerning the adoption of the Urban Water Management Plan for Ventura County Waterworks District No. 1.

A copy of the Urban Water Management Plan is available for review at the Ventura County Waterworks District's Moorpark office, 7150 Walnut Canyon Road, Moorpark, California, and at the Moorpark Public Library, 699 Moorpark Avenue, Moorpark, California.

At the Public Hearing, any person may appear and be heard regarding the proposal.

Further information can be obtained by calling the Waterworks District office at (805) 584-4830

Appendix C

FCGMA Accounting of District's Pumping Allocation

FOX CANYON GROUNDWATER MANAGEMENT AGENCY

Application for and Summary of 2002 Baseline Allocations and In-Lieu, Storage & Extraction (Conservation) Credits

Please provide the following information:

Owner/Operator's Name: VENTURA COUNTY WATERWORKS DISTRICT #1
Address: 7150 WALNUT CANYON ROAD, MOORPARK, CA 93021
Phone #: (805) 584-4835 FAX: (805) 529-7542



If you own/operate more than one well and want your well allocations combined, please check this box.

WWD No.	State Well No.	Historical Allocation	X	Reduction Factor	2002 Allocation	2002 Injections	2002 Extractions
15	3N19W-31B1	0.000	AF	x 0.85 =	0.000	AF	0.000
10	3N19W-32D1	609.260	AF	x 0.85 =	517.871	AF	0.000
5	3N19W-33P3	244.900	AF	x 0.85 =	208.165	AF	0.000
96	3N20W-35J1	611.040	AF	x 0.85 =	519.384	AF	442.619
97	3N20W-35R1	763.480	AF	x 0.85 =	648.958	AF	527.908
98	3N20W-36A2	0.000	AF	x 0.85 =	0.000	AF	390.383
95	3N20W-36G1	682.320	AF	x 0.85 =	579.972	AF	75.562
TOTALS		2,911.000	AF	x 0.85 =	2,474.350	AF	1,538.354

HISTORICAL ALLOCATIONS TRANSFERRED: 0.000 AF x 0.85 = 0.000 AF

BASELINE ALLOCATIONS APPROVED: 0.000 AF USED: 0.000 AF

STORAGE CREDITS = 0.000 AF (2002 Injections) - 0.000 AF (2002 Extractions) = 0.000 AF

EXTRACTION CREDITS = 2,474.350 AF - 1,538.354 AF = 935.996 AF

IN-LIEU PROGRAM TRANSFERS: 0.000 AF (Total AF transferred in 2002)

PREVIOUS YEARS CREDITS: 5,310.148 AF (Total 2001 credits)

Total 2002

Credits = 935.996 AF + 0.000 AF + 5,310.148 AF - 0.000 AF = 6,246.144 AF

Applicant's Name: R. Reddy Pakala

Manager

Please Print

Title

Applicant's
Signature:

12/18/03

Date

Effective beginning with the 1999 calendar year, credits will be calculated by GMA staff as provided for in Ordinance Code No. 8

DISPOSITION OF GMA APPLICATION (For office use only)

☒ Approved

☐ Denied

Conditions of Approval/
Reason(s) for Denial:

By: David Parker

Date: 12-22-03

This application for credits is valid when signed by the GMA Agency Coordinator.

Lowell Preston, Ph.D.
Lowell Preston, Ph.D., GMA Agency Coordinator

Date: 12-22-03

Appendix D

Purchase Order for Imported Water Supply to be Provided by CMWD

**PURCHASE ORDER FOR IMPORTED WATER SUPPLY TO BE PROVIDED BY
CALLEGUAS MUNICIPAL WATER DISTRICT**

PURCHASER: Ventura County Waterworks District No. 1	TERM 10 years
INITIAL BASE DEMAND: 8,235 acre-feet	EFFECTIVE DATE: January 1, 2003
INITIAL TIER 1 ANNUAL MAXIMUM: 7,411.5 acre-feet	
PURCHASE ORDER COMMITMENT: 49, 410 acre-feet	

Definitions of capitalized terms used in this Purchase Order are provided in Attachment 1. Terms used in this Purchase Order and not defined in Attachment 1 are defined in Metropolitan's Administrative Code.

COMMITMENT TO PURCHASE

In consideration of Purchaser's commitment to purchase System Water pursuant to this Purchase Order, Calleguas agrees to sell such System Water to Purchaser at the Tier 1 Supply Rate each year in an amount up to the Tier 1 Annual Maximum. System Water sold to Purchaser (excluding deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) in an amount greater than the Tier 1 Annual Maximum shall be sold to the Purchaser at the Tier 2 Supply Rate. In connection with the receipt of System Water, the Purchaser also agrees to pay all other applicable rates and charges, as established by Calleguas from time to time. The rates and charges applicable to System Water as of the Effective Date are shown in Attachment 2.

Purchaser agrees to purchase System Water from Calleguas during the Term in an amount (excluding deliveries of System Water, made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) not less than the Purchase Order Commitment.

Purchaser recognizes and agrees that Calleguas has relied and will, during the term of this Purchase Order, rely on this commitment by Purchaser in setting its rates and charges, planning and providing its capital facilities and developing its water supply, management and reliability programs. If Purchaser's applicable System Water purchases during the Term are less than the Purchase Order Commitment, Purchaser agrees to pay Calleguas an amount equal to the difference between the Purchase Order Commitment and Purchaser's applicable System Water purchases during the Term times the average of the Tier 1 Supply Rate in effect during the Term. The Purchaser agrees to pay such amount to Calleguas within the next regular billing cycle following the reconciliation of all certifications for special programs that the

Purchaser may participate in (e.g. Interim Agricultural Water Program, Long-term Seasonal Storage Service). The Purchaser may elect to pay such amount in twelve equal monthly payments over the course of the next twelve months beginning with the first regular billing cycle following the reconciliation of all outstanding certifications for special programs. If the Purchaser elects to pay such amount over the course of the next twelve months following the regular billing cycle any outstanding balance shall bear interest at Calleguas' then current investment portfolio average yield. All other amounts payable under this Purchase Order shall be billed and paid in accordance with Ordinance 12.

RENEWAL

Prior to but not later than December 31, 2010, the Purchaser may provide a non-binding written notice to Calleguas of the Purchaser's determination to extend this Purchase Order. Upon the receipt of such notice, the Board of Directors of Calleguas (the "Board") shall determine whether Calleguas will continue to provide System Water to retail purveyors by Purchase Order. If the Board so determines, the Purchaser and Calleguas shall amend this Purchase Order to include an extended term and/or to include such other terms and conditions as may be mutually agreed by the parties. If the Purchaser elects not to renew this Purchase Order it will terminate upon the expiration of the Term.

WATER SERVICE

Conditions of water service by Calleguas to the Purchaser, including but not limited to (i) delivery points, (ii) water delivery schedules, and (iii) water quality, will be determined in accordance with Ordinance 12.

In accordance with its Ordinance 12, Calleguas shall use its reasonable best efforts to supply System Water in the quantities requested by the Purchaser, but is not obligated to dedicate any portion of System capacity for the conveyance, distribution, storage or treatment of System Water for the benefit of the Purchaser or any other retail purveyor. Calleguas shall use its reasonable best efforts to deliver the Base Demand when needed by the Purchaser during the Term; provided however, there shall be no default under this Purchase Order if Calleguas fails to deliver water to the Purchaser in accordance with any such schedule of deliveries during the Term.

By execution of this Purchase Order, the Purchaser recognizes and agrees that it acquires no interest in or to any portion of the System or any other Calleguas facilities, or any right to receive water delivered through the System, excepting the right to purchase up to Purchaser's Tier 1 Annual Maximum at the Tier 1 Supply Rate provided that System Water is available. This Purchase Order governs pricing of the System Water delivered to the Purchaser pursuant to this Purchase Order and does not confer any entitlement to receive System Water.

System Water provided to the Purchaser under the terms of this Purchase Order shall be subject to reduction in accordance with the shortage allocation provisions as adopted by the Board.

In the event that Calleguas' Board determines to reduce, interrupt or suspend deliveries of System Water (excluding deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) any outstanding balance of the

Purchase Order Commitment at the end of the Term shall be reduced by the reduction in System Water made available to the Purchaser under this Purchase Order.

MISCELLANEOUS

This Purchase Order will be interpreted, governed and enforced in accordance with the laws of the State of California.

This Purchase Order will apply to and bind the successors and assigns of the Purchaser and Calleguas.

No assignment or transfer of the rights of the Purchaser under this Purchase Order will be valid and effective against Calleguas or the Purchaser without the prior written consent of Calleguas and the Purchaser. In the event that a Calleguas purveyor is acquired by another Calleguas purveyor, the Purchase Order commitment of the acquiree will transfer to the acquirer.

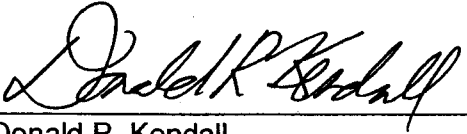
If at any time during the Term, by reason of error in computation or other causes, there is an overpayment or underpayment to Calleguas by the Purchaser of the charges provided for under this Purchase Order, which overpayment or underpayment is not accounted for and corrected in the annual re-determination or reconciliation of said charges, the amount of such overpayment or underpayment shall be credited or debited, as the case may be, to the Purchaser. Calleguas will notify the Purchaser in writing regarding the amount of such credit or debit, as the case may be. In no case will credits or debits for charges provided for under this Purchase Order be administered beyond the limit for billing adjustments as specified in Metropolitan's Administrative Code.

IN WITNESS WHEREOF, this Purchase Order is executed by the duly authorized officers of the Calleguas Municipal Water District and [Purchaser], to be effective January 1, 2003.

CALLEGUAS MUNICIPAL WATER DISTRICT

VENTURA COUNTY WATERWORKS
DISTRICT NO. 1

By:



Donald R. Kendall
General Manager

By:




Manager, Water and Sanitation
Services Division

12/20/02

APPROVED AS TO FORM AND CONTENT:

General Counsel

By:



Douglas E. Kupper

Attachment 1
Purchase Order for Imported Water Supplies
DEFINITIONS

"Base Demand" means the greater of (i) the Initial Base Demand or (ii) the ten-year rolling average of the Purchaser's Firm Demand, measured on a fiscal year basis.

"Calleguas" means Calleguas Municipal Water District.

"Effective Date" means the effective date of this Purchase Order as specified above.

"Firm Demand" means the Purchaser's purchases of non-surplus System Water supplies, including full-service and seasonal shift deliveries.

"Initial Base Demand" means the Purchaser's highest annual Firm Demand on Calleguas in any fiscal year during the period from fiscal year 1989/90 through fiscal year 2001/02.

"Metropolitan" means The Metropolitan Water District of Southern California.

"Purchase Order Commitment" means 60% of the initial Base Demand times 10. Deliveries of System Water made under the Agricultural Water Program and Long-term Seasonal Storage Service, will not count toward the Purchase Order Commitment.

"Purchase Order" means this Purchase Order.

"Purchaser" means the retail purveyor specified above, a duly organized [city/water district/county water authority] of the State of California.

"System" means the properties, works and facilities of Calleguas necessary for the supply, development, storage, conveyance, distribution, treatment or sale of water.

"System Water" means water supplies developed by Calleguas and delivered to the Purchaser through the System or other means (e.g. conjunctive use storage).

"Term" means the term of this Purchase Order as specified above.

"Tier 1 Annual Maximum" means an amount equal to 90% of the Base Demand.

"Tier 1 Supply Rate" means Metropolitan's per-acre-foot Tier 1 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 1 Rate is \$73/AF.

"Tier 2 Supply Rate" means Metropolitan's per-acre-foot Tier 2 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 2 Rate is \$154/AF.

Attachment 2
Purchase Order for Imported Water Supplies
METROPOLITAN RATES AND CHARGES
(as adopted by MWD Board)

Effective January 1, 2003	
Tier 1 Supply Rate (\$/af)	\$73
Tier 2 Supply Rate (\$/af)	\$154
System Access Rate (\$/af)	\$141
System Power Rate (\$/af)	\$ 89
Water Stewardship Rate (\$/af)	\$ 23
Long-term Storage Water Rate (\$/af)	\$290
Interim Agricultural Water Program (\$/af)	\$294
Treatment Surcharge (\$/af)	\$ 82
Readiness-to-Serve Charge (\$millions)	\$ 80.0
Capacity Reservation Charge (\$/cfs)	\$6,100
Peaking Surcharge (\$/cfs)	\$18,300

CALLEGUAS MUNICIPAL WATER DISTRICT

RATES AND CHARGES

Effective January 1, 2003

RATES		MWD Rates	CMWD Rates	TOTAL RATE
		\$/AF	\$/AF	\$/AF
TIER 1 RATE	\$	408	74	482
TIER 2 RATE	\$	489	74	563
LONG-TERM SEASONAL RATE	\$	290	74	364
INTERIM AGRICULTURAL PROGRAM	\$	294	74	368

CHARGES	
READINESS-TO-SERVE	\$ 2,748,490
(Detail by Purveyor on attached Exhibit A)	
CAPACITY RESERVATION CHARGE (\$/cfs)	\$ 19,500
(cfs to be provided by purveyor)	

